

Claims 4-12, 14 and 15 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim may not serve as a basis for another such claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by either Johansson *et al.* (US 5,368,833), Keiser *et al.* (US 6,372,806) or Persson *et al.* (US 2002/0147240), all cited by applicants or the US equivalent to foreign documents cited by applicants.

Johansson *et al.* disclose a process of mixing a silica sol (column 2, lines 48) having an S-value of 8 to 45 percent (column 3, lines 37-40) and a mineral acid (column 2, lines 58-61). Specific S-values include 32% (example 1A), 15% (example 1B), and 13% (example 1C).

Keiser *et al.* disclose a process of mixing a colloidal silica (*i.e.*, silica sol) having an S-value of 20-50 percent, preferably 20-40 (column 1, lines 50-54), with a mineral acid (column 3, lines 25-28). Specific S-values include 48.1% (example 1), 39% (example 2), 41% (example 3) and 32 (example 4).

Persson *et al.* disclose a process of mixing a silica sol having an S-value of 10-45%, suitably 29-40%, preferably 25-35% (paragraph 0012), with a mineral acid (paragraph 0017).

Specific S-values include 29% (paragraph 0037), 26% (paragraph 0039), 32% (paragraph 0040) and 34 % (paragraph 0042).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Johannson *et al.*, Keiser *et al.* or Persson *et al.*

These claims recite the size of the silicon particles. Johannson *et al.* disclose a specific surface area ranging from 750 to 1000 m<sup>2</sup>/g (column 3, lines 63-66). Keiser *et al.* disclose a specific surface area over 700 m<sup>2</sup>/g, preferably 800 m<sup>2</sup>/g (column 1, lines 50-53). Persson *et al.* disclose a specific surface area ranging from 1000 m<sup>2</sup>/g to 1500 m<sup>2</sup>/g (paragraph 0017). Because specific surface area is related to particle size, the particles of claim 13 would inherently have the same size range as those of the Johannson *et al.*, Keiser *et al.* or Persson *et al.* At best, because of the relationship of particle size to surface area, determining an optimal particle size would be within the skill of the ordinary artisan. Thus, these claims would be either fully met by, or at best obvious over either Johannson *et al.*, Keiser *et al.* or Persson *et al.*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Olerud (US 5,780,005) and Sielemann *et al.* (US 5,664,321) are US equivalents to

documents cited by applicants. The documents cited in the search reports have been reviewed. Although they are marked as either "X" or "Y", not all of them recite the S-values of the silica that they disclose.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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